

# Colorado Medicine

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## SURGERY OF THE STOMACH

Surgery of the stomach, so long neglected, has recently assumed a prominent position, almost equal to that of appendicitis or diseases of the biliary tract. The subject is being constantly discussed in societies and in journals, our own State Society being no exception to the rule.

As in the urinary-bladder, the gall-bladder, and the vermiform appendix, the principal symptoms of gastric conditions requiring surgical intervention are due to imperfect drainage. This is true of pyloric obstruction (from carcinoma, cicatricial contraction, adhesions, gastropostisis, etc.), of gastric ulcer, of hour-glass stomach, of certain forms of chronic dyspepsia, of dilated stomach, and of some other conditions with the causes of which we are less familiar.

Experience has shown that the best way to improve defective drainage is by gastro-enterostomy, or, in case of hour-glass stomach, gastro-gastrostomy. Lore-

tas' operation, stretching the pylorus, has been abandoned; while pyloroplasty, although applicable to a few cases, is now but seldom employed. The operation recently proposed by Finney, of Johns Hopkins, in which a large opening is made between stomach and duodenum, although designated as "pyloroplasty" by its originator, is really a form of gastro-duodenostomy and should be classed as such.

In pylorectomy and partial gastrectomy for malignant tumors, gastro-enterostomy is generally the most valuable feature of the operation, as it alone relieves the distressing symptoms.

Hence, aside from gastrotomy, gastrostomy, and an occasional anomalous operation for more or less rare conditions, surgery of the stomach practically resolves itself into the performance of *gastro-enterostomy*.

Without doubt, great impetus was given this useful operation by the Murphy

button, and it is still extensively employed by some of the best surgeons in this country and abroad. Recently, however, much attention has been given to various methods of suture, their advocates claiming that, although somewhat more time is required, the security is greater, the opening larger and more permanent, and injurious effects less likely to occur from a foreign body lodging in the stomach or in the bowel.

The question, formerly so much discussed, as to whether the anastomosis should be made anterior to the colon or posterior to it, seems to be of minor importance in the light of more extensive experience (Mayo), providing the opening be near the most dependent portion of the stomach. The more complicated procedures, involving coincident enter-enterostomy, appear to be falling into disuse.

Perhaps the most interesting application of gastro-enterostomy is in the treatment of hemorrhage from acute or chronic gastric and duodenal ulcers. Hematemesis, which is alarming from its profuseness or from its frequent recurrence, is almost invariably checked at once by gastro-enterostomy, and the operation is being more and more resorted to for this purpose.

The cessation of bleeding may be due to several factors, depending upon improved drainage and acting alone or conjointly,—to the more rapid removal of irritating juices and other substances; to changes in secretion; to lessening of peristalsis; to the relief of distention tending to dislodge vascular thrombi; and to the promotion of contracture of the viscous, thus causing closure of open vessels, as in post-partum hemorrhage from the uterus. (The last-named cause appeared to be the one most in evidence in a case recently operated upon by the writer.)

Whether gastro-enterostomy should be

performed in certain intractable cases of chronic dyspepsia is a question now under discussion. That relief would be obtained in many instances is unquestionable from the evidence already at hand. In this connection Moynihan says ("The Surgical Treatment of Gastric and Duodenal Ulcers," 1903, p. 23): "Inveterate dyspepsia is in itself an ample warrant for surgical treatment. Cases are in the experience of all in which prolonged medicinal treatment, most thoroughly and carefully supervised, proves ineffective, or if temporarily beneficial, is powerless to ward off the recurrence of dyspepsia. In such cases, be the physical signs what they may, an operation is desirable, and in my experience abundant justification for it will almost always be found when the stomach comes to be examined."

So strong a statement from such a prominent source is, to say the least, suggestive.

LEONARD FREEMAN.

#### *POST TRAUMATIC AMNESIA*

Street accidents are so common, especially falls from bicycles, inducing more or less loss of consciousness, that the amnesia following these, where there is sufficient cerebral concussion to cause such, constitute an interesting study.

An intelligent business man left the fair grounds on his wheel. Ten minutes later, having ridden a mile into town, he collided with a carriage. He got up after a few minutes and went to his store, but soon became so dazed that he had to be taken home. After two days he appeared perfectly well and resumed his usual occupation. He could not remember anything from the time of leaving the fair grounds, to the complete return of consciousness at home several hours later. Impressions antedating the concussion by some quarter of an hour were obliterated, and could never be recalled. Three years later this man's mind was seriously af-

fected, whether as a result of this injury, cannot positively be said.

A plumber was knocked from his wheel by a car. There was a short period of unconsciousness, and a day of mental confusion. For some two days more there was inability to recall his acts and location just previous to the accident. In three days, however, he was able to remember everything up to the very point of the accident.

A man walking along the street was knocked down by a wheel, got up in a few minutes, walked half a block to a seat where he became dazed and weak, and an ambulance was called. He was by this time able to tell where his home was, and was taken there. Afterwards, as long as the case was observed, he persisted that he had walked several blocks from the place where he was hurt, and had started back home, when he had to lie down on the seat.

The degree of external injury, of course, is no index of the severity of a brain concussion; in fact, concussion is worse in large flat surface blows than in striking sharp, pointed and cutting edges which cause simply scalp wounds. It seems that an innate brain stability is also a factor in the tenacity with which recent impressions are held on to, and recalled, after the immediate effects of the concussion pass off, supposing the concussions in several cases of about equal severity. It would appear, moreover, that very tardy, or utter inability to recall impressions just antedating injury, suggests a greater susceptibility of the cerebral elements; which may later show itself in brain disorder, perhaps insanity; as compared with the cases in which impressions are soon recalled up to the moment of the accident.

I think that something may come from a study of the amnesias connected with what might be considered rather minor cerebral injuries; that some deductions of

value in the prognosis of the future effect of such injuries may be made.

J. E. COURTNEY.

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#### NOTE AND COMMENT

*The Formula.*—“Hypocrisy, the tribute which vice pays to virtue,” is most strikingly exhibited in the formulas published for the average nostrum. One of these for an anti-tubercular serum addressed to the “Dear Doctor,” reads as follows:

#### FORMULA.

“The fluid is a clear artificial blood serum with powerful antitoxic and germicidal properties. It is isotonic with the blood, non-irritating, and non-toxic, and hence it is absolutely harmless. It contains ozone and unstable compounds, which consist of oxygen loosely combined with the organic and inorganic constituents of the blood.”

From such a jargon as this, to the learned series of C. H. N., etc., we have an endless array of exhibits of skillful word-juggling. Each of them is an attempt to bring within the bounds of respectability some preparation, which by reason of secrecy and the preponderance of private interest in its exploitation, is essentially disreputable. It is a sad comment upon current methods of medical education, that any considerable number of graduates of reputable medical colleges should be deceived by such shallow artifices. But, it seems likely that some are caught, or the nets would not be so widely and persistently and industriously spread. We can hardly hope to wage successful warfare against quackery of other kinds, if we remain a conspicuous mark for the quackery of a drug manufacturer and exploiter.

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#### NOTICE

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## SOUP DIET AND OTHER POINTS IN THE DIETETIC MANAGE- MENT OF TYPHOID FEVER.

H. B. WHITNEY, M. D., DENVER.

Until within a very few years the use of an exclusively milk diet in typhoid was almost *de rigueur*—or, at least, this was true in America. Recently many have advocated a more generous and varied diet, and especially a departure from milk alone in certain cases of idiosyncrasy and unsatisfactory appearance of the stools. Nevertheless, milk still forms the basis of the dietetic management of typhoid in nearly all parts of the world.

The query as to whether this was wholly rational, and even as to whether milk might not be one of the worst possible foods for a typhoid patient, was first aroused in my own mind by an article of Dr. A. Seibert of New York City, in the Archives of Pediatrics for 1901, p. 661. Professor Seibert has been urging the harmfulness of milk in typhoid for more than ten years. During this period he has treated 153 cases of typhoid on an exclusive soup diet together, I may add, with what seems to me a relatively unimportant addition, systematic irrigation of the rectum. Seibert's mortality has been impressively small. Of the 153 cases 7 died; and of these 7, 3 were brought to the hospital moribund, and 4 had bilateral pneumonia. These figures certainly arrest attention; and when to this testimony of practical experience in typhoid is added that of recent pediatric progress, and biochemical considerations concerning milk as a culture medium, one need not apologize for the impulse to put this method to a practical test. For it is now universally acknowledged that in the febrile and toxic disorders of the gastrointestinal canal in infancy, milk is detrimental and tends to prolong the fermentative process. Seibert's idea is that many of the toxic phenomena in typhoid may be

due to the multiplication in the intestine of other bacteria than the typhoid bacilli and that milk favors this process here as it admittedly does in the gastro-enteritis of childhood. He says: Patients fed on milk during an attack of typhoid (a specific form of enteritis) are but little better off to-day than our former little patients were during an attack of summer complaint with milk and opium mixtures in their intestines.

Besides the low mortality referred to, Seibert also claims for the soup treatment the following results, in addition to still others which I will not mention:

1. Disappearance, usually within 48 hours from the time the milk is stopped, of headache, insomnia, nausea and tympanites.

2. No tympany, nausea, or vomiting in patients thus treated from the start.

5. Disappearance of the diarrhoea within the first week.

6. In all uncomplicated cases fall of temperature within 24 to 48 hours after beginning treatment, and invariably normal temperature within 10 or 12 days.

8. Complications very rare.

My own experience with the soup treatment, aside from those cases in which I have recommended it in consultation, includes only 17 cases. But the course of these few cases has, with one exception, been so mild and extremely satisfactory that I cannot help ascribing a certain proportion of these results to the exclusion of milk. Other treatment has been of the customary symptomatic order, including fan baths usually for temperatures over 102.5, dilute muriatic acid internally as a routine measure, and whisky, strychnia, sparteine and digitalis whenever indicated by the condition of the pulse.

Case I. Mrs. M., aged 20, was first seen on August 8, 1901, when she took to her bed. Her temperature ranged from 102° in the morning to 104° in the afternoon until August 22 (two weeks), when

it gradually fell to normal. Stools two to three daily, at one time slightly tinged with blood. In the third week there was a moderate attack of neuritis in both arms. Throughout the whole course of the disease the mind was perfectly clear and bright, there was no tympany, the tongue was moist and the pulse of excellent strength.

Case II. Bert P., aged 8, came into my hands on August 13, 1901, on the seventeenth day of a severe typhoid. He had had two hemorrhages in the past four days and had still an average rectal temperature of  $104^{\circ}$  or  $105^{\circ}$ , with a pulse of 130 to 150. He was very dull and stupid, indeed almost unconscious at times, and seemingly in great danger. He had been on a milk diet for which on the 13th I substituted soup. In two days there was a great change in the general condition. The temperature fell to  $102^{\circ}$  to  $103^{\circ}$  on the 14th and in another five or six days had dropped to normal. This may have been merely a natural defervescence, and yet its coincidence with the change in diet was certainly striking.

Case III. Marion H., aged 10, was first seen on November 9, 1901, in my office. She had a mild continuous fever for ten days, ranging from  $100^{\circ}$  to  $102.5^{\circ}$ , with moist tongue and general euphoria throughout and an uninterrupted convalescence.

Case IV. Mr. G., aged 60, was seen first on August 7, 1901. He had already been ill for several days under the care of another physician. The temperature was ranging high, there was much hebetude, and the type of the disease was quite severe. Following my change to a soup diet, the high temperature continued unabated for another week and then gradually fell to normal. I could observe no effect from the change in diet; but the patient made a good recovery, though I believe he afterwards suffered from relapse.

Case V. Grace J., aged 12, was first seen on July 12, 1902. After a few days of prodromal symptoms the disease finally settled on the 9th into a regular typhoid. For ten days the temperature ranged between  $101^{\circ}$  in the morning and over  $103^{\circ}$  in the afternoon, then dropped quite sharply to normal. At no time was there any stupor, tympany or other disquieting symptom.

Case VI. Belle P., aged 14, was first seen by me on July 15, 1902, after two or three days confinement to bed. During the following nine days the temperature range was from  $103.5^{\circ}$  to  $105.5^{\circ}$ . Here soup was rejected on the eighth day and the diet was then changed to malted milk and later to albumen water. This was one of the most severe and fulminant cases of typhoid I have ever seen. On the 22nd she became very stupid. On the 24th the stools became involuntary and there developed a tendency to paroxysms of sudden fright and to cry out during sleep. On the 26th there was spasmodic twitching of the arms with Cheyne Stokes respiration. Finally on the same day convulsions appeared and continued until death on the morning of the following day, July 27, eleven days from my first visit. This case occurred in the same house with the foregoing well marked case of typhoid.

Case VII. Mrs. A. F., aged 25, was first seen on July 26, 1902. From the 28th a steady run of typhoid continued until August 20, when the temperature reached normal and convalescence began. Euphoria continued throughout the whole course of the disease without tympany, diarrhea, dry tongue, or even hebetude. In this case the evening temperature ranged between  $102^{\circ}$  and  $103^{\circ}$ .

Case VIII. Baby P., aged between 2 and 3 years, was brought home by her parents from a summer resort near Chicago where her nurse and many of the guests had been seized with typhoid.

Fever appeared on the way home and I was called on August 24, 1902. Here there was a steady, continued fever until September 17, when the temperature reached normal and practically remained there. The range of temperature was fairly high, averaging  $103^{\circ}$  to  $104^{\circ}$  in the afternoon with considerable morning drop. The course of this case was extremely satisfactory as, indeed, it usually is at an early age. The child remained bright, often playful, without tympany or other unfavorable symptom from start to finish. She was fed mainly on barley water and Horlick's malted milk, any form of cow's milk being rigidly excluded.

Case IX. Harry C., aged 20, was brought to St. Luke's Hospital on July 21, 1903, after several days of illness in a country town. The temperature for the first two days in the hospital ranged to  $104^{\circ}$  and the case seemed tending toward considerable severity. Two days after beginning the soup diet the evening temperature fell to  $102^{\circ}$  to  $103^{\circ}$ , where it remained during the following two weeks. Convalescence then began, interrupted, however, by a very mild relapse. In this case also there was at no time any tympany, dry tongue, diarrhea or other unfavorable sign. The soup was excellently borne.

Case X. Mrs. R. A. C., aged 58, was first seen on August 14, 1903. This patient is now practically convalescent after a three weeks' continuous fever, ranging to  $102.5^{\circ}$ , followed by a fluctuating temperature for one week and then a fall to normal. On September 23 a relapse occurred from which she is now recovering. This case has been complicated by an originally bad heart subject to tachycardia, by several severe rigors without discernible cause and by an unusual degree of furunculosis, some of the boils producing extensive areas of phlegmon, with abundant suppuration, and yet the

tongue has remained moist throughout, the mind clear and active and the abdomen soft. The pulse has been at times irregular, but has ranged from 115 to 150. Considering the probably fatty heart of this very corpulent patient, the course of the disease has been satisfactory beyond expectation.\*

Case XI. Ada C., aged 35, daughter of the preceding, began to show pyrexia on August 18, and was immediately put to bed on a soup diet. Her highest temperature was  $102.5^{\circ}$  on the third day; from this it gradually fell to normal in seven days. It is needless to say that there was euphoria throughout, and a rapid convalescence.

Case XII. Margaret C., aged 25, a second daughter of case X, also developed typhoid at about the same time, first taking to bed on August 20. Here there was a three weeks fever, reaching  $102.5^{\circ}$  to  $103.5^{\circ}$  in the evening with fair morning drop. General euphoria was maintained throughout the whole course of the disease; the tongue was always moist, the mind clear and cheerful, the abdomen normal, and the stools formed. Convalescence was uninterrupted.

Case XIII. Benny B., aged 17, was first seen on August 26, 1903. During the few days that he had been ill he had been upon milk. I at once changed to soup, and for seven days the evening temperature reached  $103+$ . During the following eight days it ranged from  $101^{\circ}$  to  $102^{\circ}$ , and then dropped rapidly to normal. Here also the course of the disease was without complication or any un-

\*This case proved eventually fatal, after a protracted illness of over three months, during which she seemed several times to be on the fair road to recovery. The temperature never reached normal, although during the last six weeks it was very irregular and of low range. The furunculosis had greatly improved under a mixed diet, including eggs, milk and light farinaceous food, and there were no other complications except a mild hyalitis. The gradual exhaustion was the only cause of death which we were able to discover.

pleasant symptom, the tongue being moist and the mind clear and unaffected throughout. Convalescence was smooth.

Case XIV. Mrs. D., aged 40 (?), was first seen on September 4, 1903, with Dr. Jaeger and several times afterwards. At my first visit she had been in bed for about ten days on a diet from which milk had been rigidly excluded. This case ran a course of practically three weeks, the average evening temperature being about  $103^{\circ}$ . A slight hemorrhage on the third week caused temporary anxiety and withholding of all food by the mouth for about two days. With this exception, however, the course of this case was remarkably smooth. At no time was there any dryness of the tongue, tympany, or more than the slightest degree of typhoidal stupor. Recovery was complete.

Case XV. Lester A., aged 18, was admitted to the County Hospital on November 18, 1902, with a temperature ranging between  $102^{\circ}$  in the morning and  $104^{\circ}$  in the afternoon. It continued unchanged for about two weeks, and then in the third week there was a slight hemorrhage followed by a temperature of  $106^{\circ}$  and a pulse of 160. During the three following days the temperature gradually fell to normal and an uninterrupted convalescence began. In this case milk was given almost exclusively up to the end of the second week, when the soup diet was begun.

Case XVI. William K., aged 24, was admitted to the hospital on November 28, 1902. The chart shows a rapid rise of temperature from  $99.5^{\circ}$  to  $103^{\circ}$  in the morning and  $104^{\circ}$  in the afternoon. Here it remained, however, for only four days, then dropping gradually to normal, which was reached on the eleventh day after admission. This case was on soup diet from the outset. At no time was there any dryness of the tongue or other disquieting symptom.

Case XVII. Katie P., aged 4, was ad-

mitted to the hospital on December 5, 1902. I am unable to say how long she had already been ill, but on entrance her temperature was running between  $103^{\circ}$  and  $104^{\circ}$ . Here it continued for six days and then fell in the following three days to normal, where it remained. The diet in this case from the date of entrance was malted milk and occasionally broth. The child was very quiet throughout but otherwise there was constant euphoria.

It is evident that these few cases can prove nothing, least of all with regard to mortality. They are merely corroborative, in some slight degree, of the claims made by Seibert. With the exception of one case which died of probable meningitis on the eleventh day of a most extraordinary and fulminant course—quite out of the usual order of typhoid fatalities—these cases were all singularly devoid of either severe toxic or gastro-intestinal symptoms. In only two cases, and in no case where milk was withheld from the start, except in case VI, was there delirium, sleeplessness, dry tongue, tympany or more than the slightest degree of diarrhoea. The soup diet was universally well borne; in two or three cases it finally caused some slight disgust and another food was temporarily substituted. As to the maintenance of nutrition, I can give no figures but merely state my impression that these patients reached convalescence in quite as good condition, to say the least, as those who are fed on milk.

In the method of feeding pursued in the above cases, a rich soup was made according to the following directions: Five pounds of soup bone (veal or beef or other meats) is put in ten quarts of water, brought to a boil and skimmed. One pound of pearl barley is then added, the whole is cooked for six hours, then strained and seasoned. The patient receives 40 ounces of this soup between 7 a. m. and 7 p. m. Some prefer eight

ounces every three hours, others four ounces at one and one-half hour intervals. It will be observed that feeding is practiced only in the day time, thus giving the stomach at night a needed rest and largely preventing, I think, an early abhorrence of food.

Horlick's malted milk has been referred to as a substitute. While I prefer the plain soup, I consider either the malted milk, Robinson's barley, or albumen water valuable alternatives in those rare cases where the soup causes nausea. Or, one may use a perfectly plain thin bouillon which has been fortified by the addition of somatose in quantities of, say, an even teaspoonful to the pint. I occasionally, too, add the yolk of a raw egg to each eight ounces of soup.

In this plan of feeding in typhoid fever one relies mainly, of course, on the soup, and until the third or fourth day of convalescence, it must be given as regularly and persistently as if it were milk. As adjuncts, however, there can be no possible objection to any of the following ingestae: Ice water in unlimited quantities; lemonade, especially when made with albumen water; sherbets; tea or coffee in moderation; grape juice; jellies made of gelatine; clam or oyster broth made simply with water or with Robinson's barley; tropon or somatose; and the various other beef peptonoids.

The possibly favorable effect of a soup diet as regards particularly tympany, and also the good results of the so-called Ochsner treatment of some forms of appendicitis, suggest the question as to whether it might not be possible to still further improve the dietetic treatment of certain complications of typhoid, notably perforation and hemorrhage. Osler speaks of the latter as demanding a "limited diet." I would go much further and, until at least the appearance of a fecal stool, restrict the patient to exclusively rectal elimination in all cases where this

is possible. To continue to give food by the mouth while an attempt is being made, as it always should be, to inhibit intestinal peristalsis by opium, seems a trifle irrational. Moreover, while recognizing the great importance of maintaining general nutrition in every legitimate way, I doubt whether the benefit and urgent need of food in the average case of typhoid is quite as great as is commonly supposed. Patients rarely seem to me to die of inanition. What we fear, aside from the grave complications, is toxæmia and its effect upon the heart. At all events it must be admitted that there are times in the course of typhoid when the furtherance of nutrition is a relatively unimportant matter.

As to intestinal perforation, operation should, of course, be the only consideration when the condition is recognized within the first twenty-four hours. But in cases which come under observation at a later period, and when the signs are at first so indefinite that a waiting policy is unavoidable, opium and the entire cessation of stomach feeding should be the rule. Indeed, this would seem to be a wise precaution in any case of considerable abdominal pain, such as not infrequently precedes the occurrence of complete perforation. Nothing, it seems to me, could possibly influence so favorably, either an intestinal hemorrhage or a threatened perforation, as absolute inhibition of intestinal peristalsis, such as is possible only when the stomach and bowel are kept empty.

A word, finally, as to the proper composition of nutritive enemata, which, as we have seen, are not infrequently useful in typhoid fever. This very important question has of late received careful attention from competent investigators; certain points may now be regarded as quite definitely determined, and that, too, in a way quite at variance with commonly received opinion. It was Ewald, I think, who first

showed that if raw eggs are injected into the rectum with about a half drachm of common salt to each egg, their nutritive value is multiplied threefold, about 75 per cent of the albumen being now absorbed as against only 25 per cent when the salt is omitted. Roux has more recently confirmed this statement and Deucher also emphasizes the great value of salt thus used. Another fact upon which there is very substantial agreement (Ewald, Deucher, Rosenheim) is the rapid and complete absorption and therefore great nutritive value of sugar, either grape or cane. On the other hand, some of the more commonly used ingredients of nutrient enemata appear to be of very doubtful utility. Fats are practically unabsorbed. Milk, peptonized, may be taken up in part, but Ewald does not use it at all, and in agreement with him are Leube, Jaccoud, Rosenheim, Fleiner and Deucher. The latter, in an article abstracted in the *Excerpta Medica* of 1903, No. 6, states the following objections to peptonized milk: The cream, like all fats, is practically unabsorbed; the milk sugar, owing to the very slow absorption of milk, tends to favor fermentation; the same is true of the albuminoids, which are poorly absorbed unless peptonized, and the action of peptone interferes very materially with the far more valuable action of salt on eggs. Peptonized milk alone, therefore, is far inferior to eggs in nutritive value, and any form of milk seems to be a decidedly objectionable addition to other enemata. Starches are absorbed much more slowly than sugar and much more imperfectly utilized. Finally, peptones also are far inferior to eggs and salt in almost every particular. They are more expensive, more difficult to obtain, and about two ounces of solid peptones, the most that can well be given in a single enema, has only half the nutritive value of three eggs with salt (Deucher). Added to eggs, peptone is decidedly objectionable

for the same reason as peptonized milk and should never be used.

The best nutritive enema, then, for routine use is probably the following, or something like it: Two or three eggs are beaten up with half an ounce of cold water. Enough common salt is added to represent a half drachm for each egg, practically one even teaspoonful for three eggs. A 10 per cent cane sugar solution is then added in sufficient quantity to make a total of six or eight ounces. I know of no objection to the addition of one-half ounce whisky unless, as I have sometimes thought, it may make the enema more difficult to retain. The enema should be introduced into the rectum very slowly in either the lateral or knee-elbow position, and not oftener than every four—preferably every six—hours. The addition of 10 to 20 drops of laudanum is often necessary to aid in retention.

#### Discussion.

Dr. Wilson: I have been impressed with the unwisdom of giving milk indiscriminately, as we get it in our city. We all know that much of our milk is impure; and some of it has been brought from dairies where typhoid fever has existed. A number of years ago I discovered in my practice that in one small hotel they had had eight cases of typhoid fever. I made enquiry of the proprietor as to what milk he was using. He mentioned the name of the dairy, and said he was getting twelve gallons of milk a day from it. He had a daughter, twelve years of age, afflicted with typhoid fever. Upon hearing that he was using this milk, and that other families suffering from typhoid fever had been using it, I asked him to order it stopped at once and commence on other milk. He did so, and had no other case of typhoid fever in his hotel that summer. We had been feeding this daughter almost wholly on this very milk that had caused so much typhoid fever throughout the city, and had caused eleven cases of typhoid fever at the dairy.

Now, in view of this fact, it becomes a matter of importance to know that the milk you get is pure, that there is no case of typhoid fever at the dairy from whence the milk comes, and that they have had no typhoid

fever at that dairy during that season. In addition to this I have always since then, and even before, directed some kind of soup to be alternated with the milk. I have always, at least for a decade, ordered our milk diluted one-fourth with water, so that the patients were more likely to digest it, and that it was more likely to do them good in its digestion. I am satisfied that in the present situation of our dairy business it would be wisdom to have our dairies examined into more carefully to know from whence this milk is coming and when contaminated we should desist from its use.

Dr. Stuver: I want to confirm one idea advanced by Dr. Whitney, and that is the very great value of salt in the system during the continuance of typhoid fever. Four years ago I began treating typhoid fever by the injection of normal salt solution, and since that time have, in connection with every case that could take it, treated sixty-two cases of typhoid fever with normal salt solution and a milk diet. A few of those cases could not take milk on account of the repugnance existing in some persons to a milk diet. Milk was used in nearly all the cases, however, and as they ranged from sixteen months to fifty-seven years, they covered the whole gamut of age as ordinarily found in typhoid fever. Some of them were very severe cases, the temperature ranging for a week to ten days above 105, from 105 to 105 3.5. Of the sixty-two cases treated by the systematic injection of normal salt solution, there was only one death. There was one other case that this treatment, the salt solution, could not be used in. This other case died, which made a death rate of two out of the sixty-three. I believe if normal salt solution should be introduced into the system that the death rate would be very materially reduced, because it certainly helps to eliminate the toxines that are formed during typhoid fever.

Dr. Hamilton: I have found that where solid matter is given, whether it is in soup or any other liquid, that it takes as much to digest it as though that food was eaten solid. Therefore I think that a soup that contains solids, no matter how it is prepared, will take the same time to digest. A typhoid fever patient having a high temperature cannot digest a solid food, and therefore requires a liquid food which takes the least possible time to digest, and that we find in milk or the albumen of the egg. In my practice I have made the rule to give milk, good pasteurized milk

so as not to be infected—and dilute it one-quarter or one-half with lime water and also give the albumen of the egg beaten up or by the rectum. In that way I have found my patients get along finely in the few cases I have had. Of course they were not a great number. I have had no bad results. I think it is very good treatment, as Dr. Whitney suggests, to give the egg by the rectum.

Dr. Pfeiffer: I remember, some twenty-two years ago, when I was an interne in the hospital where Dr. Bigelow, the inventor of the lithotrite and the author of reduction of hip dislocations by manipulation was on duty, at the time Dr. Tanner was fasting for forty days; and Dr. Bigelow said to a number of his students one morning, "that is nothing very remarkable, it is practically about what every normal case of typhoid fever does, it fasts for about six weeks." In a very large experience with typhoid fever it has been my conclusion that we have practically a case of starvation on our hands, which we have to stimulate more or less and keep alive by enemas; and then to overcome the complete starvation we give what little we can safely by the stomach. In the majority of my cases I prefer milk, and occasionally I add a little diluted soup and then again a little white of egg in water and strained.

I have on my hands now two cases of typhoid which started in mildly enough, but they are the kind that begin with jaundice, showing that your germ is busy among the glands and organs of primary digestion. This very fragile little girl got along very well on milk and was improving, and then I diluted a little chicken broth and let her try it, and immediately she had some abdominal complication. Whether her inflamed alimentary canal was trying to move along the fecal contents, or whether she had an inflamed mesentery which started up a little local peritonitis, or whether her spleen was enlarged and congested, or whether one or the other of the many complications which come in, I could not make up my mind. It may not have been the food at all. I had to fish up this old time-worn slip that I have had in my pocket for about nineteen years to show my authority for giving her soup. This is about as musty and time-worn as some of the old letters of the Revolution which you see in some of the libraries in the large cities. I was criticised for giving her a little soup, and I had to get this out to show my authority for so doing. So I read off this as

the diet which we use to stop the starvation as much as we can: "Milk diluted more or less with water, or aerated water; mutton, chicken or beef broth or consomme; buttermilk; thin barley gruel which has been well strained; strained white of egg with equal parts of water with a little lemon juice as a flavoring ingredient; barley water; lemonade." It seems to me that it is the best guide that you can hit upon. Some cases will take milk and some will take broth and some will take a little white of egg; but as for forming a conclusion as to which diet is the best, I think we can select either of the three, modified as the case demands, and stand off the starvation as much as possible with one of these three articles.

Dr. Gilbert: In the early part of 1900 I lost two cases of typhoid fever. I had been giving the milk diet almost exclusively, as I had been taught to do; and then I began to try (which was not original) the mixed diet. Since that I have given the diet principally on milk, giving perhaps twenty ounces of milk in twenty-four hours, alternating every two hours with the white of an egg as suggested with a little lemonade, grape juice, sweet cider or orange juice. Those are the fruit juices I use. The broths include mutton, beef, chicken and oyster. Occasionally buttermilk is substituted for the sweet milk, and occasionally I have given ice cream instead of the milk. When I have got tympany I have stopped the milk and without an exception the tympany has subsided. I have a record of a little over sixty cases since that time without a death. In every instance where I have got a case of bad tympany I have stopped the milk diet. I have used the same enemas as have been suggested.

Dr. Ashley: I want to go on record as opposed to the milk diet in typhoid fever first, last and all the time. I remember the cases of Seibert, of which Dr. Whitney spoke. I think it is as unprofitable as it is in gastro-intestinal trouble in children. This is acknowledged to be the fact, if given in any quantity, no difference how pure it is.

Dr. Spivak: The indications for nutritive enemas are when the esophagus does not admit the passage of food, or when the stomach for some reason or other does not digest the food. When the intestines are involved, or any lesion found in the intestines, nutritive enemas should not be given. I think Ochsner would have still greater success if he did not

use nutritive enemas. It has been absolutely and positively shown by investigators, and lately by one Burnheim, of Philadelphia, that the nutritive enema produces peristalsis of the intestines. Now, if we want to keep the intestines empty in typhoid fever what difference is it whether you introduce the food into the intestines or the stomach? It will produce peristaltic movements of the intestines and you will not secure the rest that you require. Patients can live without food, live for days and days. I think every one here who has had charge of patients during an attack of appendicitis and who has followed Ochsner's method has seen them live for fifteen or twenty days without a morsel of food, except a little water. They can stand even the absence of water for five or six days. Therefore it seems to me that these nutritive enemas in diseases of the intestines are not only not indicated but contra-indicated.

Dr. Whitney: I will simply say that I did not expect to make very many converts to this new idea. This old idea of milk is rooted and grounded in the profession, and I did not expect very many would be changed in their opinion by what I had to say. It is something of a new idea, however. It has pleased me very much. I am impressed with it particularly because I feel so strongly that milk is injurious in gastro-intestinal trouble in children, that I believe it might well be so in adults. It is well worth trying, and I hope a few of you, at least, may be tempted to try it.

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#### OPERATIONS ON THE KIDNEY; WITH REPORT OF A CASE OF NEPHRO-URETERECTOMY.

BY CHAS. H. MCLEAN, M. D., DENVER.

The history of the practical surgery of the kidney, though extending over but a short period, is marked by great progress in the successful treatment of renal diseases. While the medical treatment of kidney affections has always been very ineffective, the surgical treatment, which had its beginning only 35 years ago, has steadily progressed, until now nearly every chronic disease of the kidney is amenable to successful surgical interference. In fact, in the majority of these diseases, it is the only form of treatment

which can be undertaken with any reasonable expectation of permanent improvement. From the time that Simon, of Heidelberg, performed the first intentional nephrectomy in 1869, little advancement was made until the introduction of nephro-lithotomy, by Morris, of London, in 1880, and the establishment of nephrorraphy among the recognized surgical operations, by Hahn, of Berlin, in the following year. The introduction of these procedures marked the beginning of a period of activity in renal surgery and the succeeding years have shown a constant advancement in this line of work. I shall consider briefly the surgical operations that are now commonly performed upon the kidney, but will first report a case of nephro-ureterectomy for ascending uretero-pyelitis accompanied by a kink in the ureter. This case, in which the symptoms resembled very closely those produced by renal calculus, presents some interesting and rather unusual features, namely, the very profuse and long continued hemorrhage, occurring at short intervals during a period of more than a year and being almost continuous for the last six months preceding the operation; the very acute angle at which the ureter was bent upon itself; the long period over which the history of the case extended and the advanced age of the patient.

Mr. B. W., aged 72 years, first consulted me on April 30, 1898, when he gave the following history: About 30 years ago he had an attack of excruciating pain in the region of the left kidney, extending to penis and left testicle, lasting one day and terminating rather abruptly. He had no further trouble until about ten years ago, when he was suddenly seized with another such attack. During the past ten years he has suffered from attacks of renal colic, at intervals of six months to a year. About a year ago, during a severe attack of nephralgia, he

had a profuse hemorrhage from the kidneys, which continued for several days, the pain being more or less constant, but with exacerbations at times. For the past year, at intervals of two or three months, he has passed blood, accompanied at times by paroxysms of intense pain, nausea, chilliness and light fever; the hemorrhage lasting from a few days to two weeks and being very profuse, a large amount of blood was lost at each of these attacks. For the past two or three months the hemorrhage has been almost continuous, with attacks of nephralgia at intervals of a few days to two weeks. He had no appetite, was nervous and restless and slept poorly. At my first examination his condition was as follows: He was very anaemic, poorly nourished and had lost much in weight during the past year. His kidneys were normal in size and position, some tenderness was elicited by bimanual palpation over the left kidney and ureter. He passed large quantities of blood, which was intimately mixed with the urine and being so great in amount that the entire output of the bladder, which amounted to about three or four pints in the 24 hours, had the appearance of almost pure blood. Long ureteral clots were passed occasionally. There was frequent and painful micturition, accompanied by straining; a constant pain which was aggravated by exercise, in the region of the left kidney, with occasional paroxysms of intense pain extending along the course of ureter to penis and left testicle, accompanied by nausea and vomiting, chilliness and fever, with a constant desire to urinate. There was almost complete anuria during these paroxysms, which lasted from a few hours to a day. He took very little nourishment and was very restless and sleepless. A diagnosis of stone in the kidney was made and operation was advised, but declined. Under medical treatment the symptoms continued unabated for nearly a week, when

the hemorrhage ceased, the urine cleared up and the pain subsided, after the administration of large doses of gallic and sulphuric acids. The patient felt so much better that he disregarded my advice as to remaining quiet and without my knowledge departed for his home, which was about 50 miles distant. I learned nothing more of the case until July 25, when he returned to me, giving a history of having been free from hemorrhage for about two weeks after returning home, when it again returned and soon became so profuse that he was unable to empty the bladder, which became filled up with clotted blood. He suffered from complete retention for a couple of days before he called in a physician, who, after much difficulty, succeeded in washing the bladder free from clots, but owing to the long continued distention of the bladder, catheterization was required from this time on and he soon developed a violent cystitis and was confined to his bed for several weeks before returning to see me. I found his condition to be much worse than when he was first seen three months previously. He continued to pass a large quantity of blood and was profoundly anaemic, his bladder was inflamed, his tongue red and dry, his pulse feeble, and his temperature  $101^{\circ}$  F., his suffering was intense and his general condition very bad. He was now anxious for an operation, which was decided upon, as the only resort, his life being in great danger from the constant bleeding and intense suffering. On July 27, 1898, I made an oblique lumbar incision and exposed the left kidney. Nothing abnormal could be detected by palpation and an incision was made through the convex border of the kidney and the pelvis explored with negative results. A sound was then passed through this incision into the ureter and an obstruction met with in the region of the pelvic brim. The lumbar incision was extended and the ureter separated from the

adjacent structures until the obstruction was reached, which proved to be due to the ureter being bent on itself, at a very acute angle, and held thus by firm inflammatory adhesions. After separating the adhesions and straightening the ureter as much as possible, an effort was again made to pass the sound beyond the obstruction, but was unsuccessful owing to the thickening and tumefaction of the ureter in this region, which nearly obliterated its lumen. The kink had evidently been caused by ulceration following injury to the ureter, by a calculus which had previously passed through it and the subsequent contraction of the protective inflammatory exudate, which had been thrown out in front of the ulcer. The renal pelvis and the proximal portion of the ureter were dilated and inflamed and it was considered advisable to excise both kidney and ureter, which was soon accomplished, the ureter being divided at a point well below the pelvic brim.

The patient made a good recovery. There was a slight suppuration of the perirenal tissues, but the wound was entirely healed before the end of the third week. A catheter was passed 10 hours after the operation and six ounces of urine withdrawn. The excretion of urine increased steadily and renal compensation was soon established. For the cystitis he was irrigated daily for several weeks. A solution of boracic acid was used for a time, then potassium permanganate and later on nitrate of silver in weak solution. The inflammation subsided slowly but steadily and at the time he left my care and returned to his home on September 30, his bladder gave him very little trouble. His physical condition had improved very much, he had gained in weight and strength, had a fair appetite and slept well. He had been entirely free from pain and hemorrhage from the time of the operation.

I have been informed that after he returned to his home his bladder seemed so much better that he neglected the treatment of the cystitis and some time afterwards the inflammation extended along the ureter to the right kidney, a pyonephrosis developed, from which he died about five or six months from the date of the operation. Had the operation been performed at the time it was first proposed, before the development of the cystitis, there is but little doubt that the right kidney would have remained free from infection.

The preparation of the patient for any of the operations on the kidney requires special care. The urine should be carefully examined and the amount secreted on several successive days preceding the operation should be determined. The segregation of the urine and examination of that secreted by each kidney, will prove very valuable in many cases in determining the method of terminating the operation. A digital or cystoscopic examination of the bladder should be made, in some cases, after the patient has been anaesthetized. For renal surgery chloroform is undoubtedly the best anaesthetic and the one to be employed in the majority of cases. With regard to the choice of method for exposing the kidney for operation, while there are a few eminent authorities who are very decided in their advocacy of the abdominal transperitoneal method, as the one to be chosen in most cases, I believe it is pretty well conceded by the great majority of operators, that the lumbar extraperitoneal route should be adopted whenever practicable, and that this method is applicable in nearly all cases requiring operation.

Nephrotomy is the oldest surgical operation on the kidney and has been employed since a very early date, but prior to 1880 was employed only for the evacuation of pus. It is now commonly employed as an exploratory procedure or to

drain the kidney in cases of obstructive anuria, to liberate pus, to facilitate the search for stone and as a simple puncture to relieve the pain due to increased tension from congestion, inflammatory hyperæmia or the subcapsular extravasation of blood.

Nephrotomy for the extraction of stone or nephro-lithotomy, is now regarded as one of the most successful operations of surgery. It is accompanied by a low mortality and has almost entirely supplanted nephrectomy for renal calculus. Another modified form of nephrotomy is nephrotresis, in which the cut edges of the incision into the parenchyma or pelvis of the kidney are sutured to the parietal wound, to establish permanent drainage of the urine through a fistulous opening. In every case of nephrotomy before completing the operation, the ureter should be explored by passing a sound from the renal pelvis into the bladder, to determine if any obstruction exists in any part of its course.

Nephropexy is the fixation to the abdominal wall of the freely movable kidney. The term nephrorraphy, formerly applied to this operation, had better be reserved to indicate the suturing of wounds of the kidney substance, inflicted during the course of surgical operations or those due to accidental injury. The fixation of the kidney is attended by most excellent results in cases where the symptoms due to a wandering kidney have failed to yield to other methods of treatment, and in such cases may be strongly recommended, with every assurance of relief. Nephropexy may be performed by several different well established methods, but the operation which seems to give the most uniformly good results is that of Edebohls. The distinguishing feature of this method consists in splitting the proper capsule along the convex border and peeling it off until half the kidney is denuded, and passing the suspending

sutures through the reflected capsule so as to include also a portion of the adherent capsule and thus anchoring the raw surface of the kidney to the abdominal muscles, the fibro-fatty capsule having been previously either dissected off or displaced beneath the kidney. The results of this operation have been very satisfactory, and among other beneficial effects by which it has been followed, it has been observed by Edebohls and other operators, that in many cases where nephritis existed in movable kidneys, thus operated upon, the operation was followed by an improvement of the nephritis, a diminution of the amount of albumin in the urine and in some instances a complete disappearance of the symptoms of nephritis.

This led to the employment of decapsulation of the kidneys for nephritis, which was proposed by Edebohls of New York, who was the first to completely decapsulate both the kidneys for chronic nephritis, a few years ago. Since then he has employed the operation in a large number of cases and his recent reports are most encouraging. Many other operators have adopted this procedure for nephritis and their results have been equally favorable. The operation is strongly advocated by Ferguson of Chicago, one of the original investigators of this method, who considers it applicable in both acute and chronic interstitial and parenchymatous nephritis. Those who maintain that decortication offers greatest hope of success in cases of chronic interstitial nephritis, attribute the favorable results to the fact that the contracted kidney being relieved of its tension, the circulation through the organ is improved and its normal functions are gradually restored. Ferguson and others regard the improvement of the renal circulation as the result of the attachment of the raw parenchyma to the abdominal wound, thus establishing an anastomosis between the

visceral and the parietal vessels. The means by which the improvement is brought about and the diseased conditions of the kidney most likely to be benefited by this treatment, remain to be determined by the experience of the future. From the reports of the successes attending this operation we may confidently expect it to become established as a recognized and legitimate surgical procedure.

Nephrectomy. The indications for this operation are becoming more limited as the technique of renal surgery improves. From being the routine method, in the early days, of treating such diseases as hydronephrosis, renal calculus, pyo-nephrosis and movable kidney and for obstruction and injury of the ureter, it has now come to be regarded as the operation of last resort for these conditions.

A partial nephrectomy is now performed in many conditions, which, until recently, called for the complete excision of the organ. Nephrectomy is always a serious operation and one applicable only in cases where all other means have failed to benefit and where the other kidney is known to be capable of carrying on the renal functions.

The lumbar route should be chosen in all cases except possibly in operations for the removal of very large tumors, when the trans-peritoneal route or a combination of the lumbar and abdominal methods may be adopted.

For lumbar exposure the oblique incision has many advantages over the others. It can be easily extended so as to expose the ureter to its termination, when, as it frequently happens, it becomes necessary to excise the ureter along with the kidney.

Koenig's angular lumbar incision or the retro-peritoneal lumbo-abdominal method, possesses the advantage of affording a large operating space, without opening the peritoneum. For the abdominal operation, Langenbach's incision over the linea

semilunaris is always to be preferred to the incision in the median line. Whenever practicable, a partial nephrectomy should be done instead of the total operation. This conservative procedure may be adopted with advantage in many cases of simple neoplasm, fistula, tubercle, simple and hydatid cysts and in some cases of injury.

Nephro-ureterectomy, or the simultaneous extirpation of the kidney and ureter, becomes necessary when, in the course of an operation for excision of the kidney, the ureter is found to be dilated, inflamed, tuberculous or septic. It may also be required for injury or disease of the ureter, where partial ureterectomy or ureteral anastomosis cannot be accomplished.

#### *AN OUTLINE OF ALBUMINURIA.*

BY EDWARD C. HILL, M. D., DENVER.

##### FUNCTIONAL OR PHYSIOLOGIC.

Small quantity; transitory and intermittent; very rarely hyalin casts; apparently healthy but often neurotic subjects.

*Causes:* Cold baths; severe mental or muscular exertion (cycling for example); violent emotions; eggs, cheese or meat, root-beer or ginger-ale in excess; ether or chloroform anesthesia; concentrated urine. Cyclic, periodic or postural form most common in adolescents and young adults—intermits at night or during rest.

*Treatment:* Avoid too free use of meat and eggs; milk best food; avoid over-exertion, but live outdoors as much as possible; small doses of iron (Basham's mixture or other vegetable salts) for anemia—arsenic a valuable addition in girls predisposed to chlorosis.—Tyson.

Correct gastric and intestinal indigestion; keep bowels freely open; blue pill occasionally; 5 to 10 m. of Fowler's solution and 5 to 8 gr. benzosol after each meal.—Butler.

R. Acidi gallici gr. v-x; acidi sulph.

dil. m. iiss.; tinct. lupulini m. v; infusum lupulini q. s.: Tablespoonful t. i. d.—Aitken.

Clemen's solution of bromid of arsenic m. i t. i. d., gradually increased to m. iii t. i. d., in about 2 oz. water, when albumin apparently due to defective digestion of proteins.—Brunton.

*Postural:* Rest in bed or a chair for two hours after a full meal; supporting and roborant measures.—Geissier.

*Cyclic:* Alkalies (Rochelle salts, sodium sulphate or phosphate or potassium acetate) and fairly free purgation by salines and an occasional mercurial pill when high arterial tension; mineral acids, strychnin and sometimes iron when tension low.—Robert Maguire.

##### RENAL.

Persistent and usually considerable (except in chronic interstitial nephritis); nearly always tube-casts, anemia, dropsy or uremic symptoms.

##### ACUTE DIFFUSE NEPHRITIS.

Scanty, often bloody urine, containing blood and epithelial casts; marked dropsy and albuminuria; fever.

*Treatment:* Calomel and salines of great service for infants and young children (post-scarlatinal type).

Mist. ferri et ammonii acet. dr. i-iv well diluted t. i. d. after hematuria disappears.—Basham.

Strontium lactate gr. xv four times a day, in conjunction at outset with hypodermics of pilocarpin and with dry cupping, hot vapor baths and milk diet.—Da Costa.

R. Potassii acet. gr. xii; infus. digitalis dr. ii; infusi juniper dr. ii: Tablespoonful every two to four hours as a diuretic.—Potter.

Rest in bed (in warm room) in blankets and clothing of thin canton flannel; diet of milk (or milk and soda water) or buttermilk, gruels of arrowroot or oatmeal and barley water, bread and butter, lettuce, water-cress, grapes, oranges and

other fruits as convalescence is established; gradual return to meat diet; drink freely of alkaline mineral waters, ordinary water or lemonade—Imperial drink: 1 dr. cream of tartar to a pint of boiling water, to which is added the juice of half a lemon and a little sugar, to be drunk cold.—Osler.

Febrile: Hot air bath daily; electuary of potassium bitartrate and honey freely for bowels; diuretic pill t. i. d. of a grain each of digitalis, squill and caffeine citrate.—Saundby.

Scarlatinal: Open bowels regularly with jalapin (gr. i) or scammony (gr. v-vii) or seidlitz powder once a day; immerse up to chin for 15 to 20 minutes night and morning in warm bath (100° F.), then wrap in warm blanket and put to bed again; dry cupping to lumbar region; frequent hot applications of spongiopiline. R. Tinct. digitalis m. v; liq. ammon. acet. m. xxx; spt. ether nitrosi m. v; syr. tolu m. x; aquam cari q. s.: Teaspoonful every two hours for child of 6 or 8 years. Potassium citrate may be combined in sufficient quantity to keep urine alkaline. Warm wet pack for two or three hours at a time, or hot pack with jaborandi, or hot air baths for 10 to 30 minutes, when suppression and threatened convulsions.—Goodhart and Starr.

Flush colon with saline solution at 110° F., 1 to 1½ pints every 6 to 8 hours. Chas. G. Kerely.

#### CHRONIC PARENCHYMATOUS NEPHRITIS.

A large amount of albumin; granular and fatty casts; marked dropsy and pallor of face.

*Treatment:* Small doses of iodids continued for months or even years; larger doses (10-15 gr.) for a time if syphilitic history.—Leonard Weber.

Skimmed milk cure; copious draughts of water; cream of tartar, lemonade or co. jalap powder for bowels.

Basham's mixture, a tablespoonful t. i. d. with occasional vapor bath, when ac-

companying cardiac hypertrophy.—Da Costa.

R. Ferri et ammon. cit. gr. vi; potass. cit. gr. xx; tinct. aurantii amari m. xv; syr. aurantii m. xxx; aquam ad oz. i: Take t. i. d. after meals.—Bruce.

**Early Stage:** Keep patient quiet as possible and guard against exposure to cold (woolen undergarments and stockings); saline cathartics for bowels; stimulate skin by means of hot air and pilocarpin; potassium salts to wash out kidneys; diet of milk (every 3 hours) and a little fruit, with occasional fish or white meat; careful watching during convalescence.—I. N. Danforth.

**Fatty Stage:** Small doses of pilocarpin four times a day; warm salt water bath in warm room three times a week, followed by smart friction; rub with fresh, warm olive or sweet almond oil after each bath if skin is rough and dry; saline cathartics gently and an occasional cholagogue (podophyllin gr. 1/10, calomel 1 gr., sodium bicarbonate 3 gr.—one powder every third night); potassium acetate, citrate or bitartrate freely diluted as diuretics; digitalis or strophanthus as needed for heart tonics; Basham's mixture or dialyzed iron; calomel and jalap, concentrated salines, elaterium, pilocarpin and hot air apparatus (or hot bath or warm pack) for dropsy.—I. N. Danforth.

**Albuminuria:** Sodium tannate (dose 5 to 20 gr. in water); tannic or gallic acid; nitric acid, ergot, caffeine; fuchsin, 1 to 3 gr. in pills.—N. S. Davis, Jr.

**Scanty Urine:** R. Potass. acet. gr. xx; spt. juniperi m. xxx; infusum digitalis q. s.: Dessertspoonful every 3 hours.—Shoemaker.

#### CHRONIC INTERSTITIAL NEPHRITIS.

Large quantity of urine of low specific gravity; albumin slight in amount—may be absent for a time; narrow hyaline casts; arteriosclerosis, cardiac hypertrophy and uremic symptoms.

*Treatment:* Mixed diet of milk and

vegetables; no alcohol; water freely; woolen underclothing; avoid exposure in damp, cold weather; Turkish bath once a week; avoid all mental and bodily fatigue; easy, quiet, regular life.—Edwin F. Wilson.

Mercuric chlorid, gr.  $\frac{1}{20}$  twice a day.—Da Costa.

Chlorid of gold and sodium, gr.  $\frac{1}{20}$  to  $\frac{1}{10}$  at a dose, or prolonged administration of iodids.—Bartholow.

Tinct. ferri chloridi  $\frac{1}{2}$  to 1 dr. t. i. d.—Weir Mitchell.

Cod-liver oil of great value in cases with anemia and fair digestion.—Butler.

Operation to remove fibrous capsule of kidney, slipping organ back into its fatty capsule.—G. M. Edebohls.

Diet: Moderate amounts of boiled meats, eggs, cheese, milk, readily digested vegetables, cereals and fruits; avoid much salt, spices and meat extracts; only moderate quantity of fluids.—Rzetskowski.

Tinct. nitro-glycerin, 1 drop gradually increased to 5 drops, four times daily on sugar for high arterial tension.—Bartholow.

Cardiac Dilation. (Gallop rhythm or fetal heart sounds; short breath; scanty and highly albuminous urine; local dropsy): Morning dose of salts or calomel; strychnin and 10 m. tinct. digitalis three or four times a day.—Osler.

Uremic Symptoms. (Extreme restlessness and mental wandering; heavy, foul breath and coated tongue; may be intense frontal headache, palpitation, numbness and nocturnal cramps): Saline purgatives and hot baths; nitroglycerin; for convulsions, if severe, use inhalations of chloroform, venesection, free sweating, chloral or morphin; for coma, active purgation, pilocarpin and hot bath; morphin indispensable for restlessness and delirium.—Osler.

Saturnine Nephritis: Patassium iodid at first in doses of 34 to 45 grains daily; later, tonics and milk diet; when urinary

functions insufficient, give diuretics, drastic purgatives and sudorifics.—Lanceriaux.

Lithemic Nephritis: Dry, warm climate; woolen clothing day and night, summer and winter; hot air or vapor bath in patient's own rooms once a week for not more than 20 minutes, followed by good rubbing and then to bed; tepid sponging allowable every morning; daily exercise short of fatigue; abstinence from butcher's meat, cheese, alcoholic drinks, beef tea and soups, sugar and sweet things; milk in moderation with bread or puddings; also light meats, fish, fowl, butter, eggs, fruit, vegetables, farinaceæ, tea, coffee, cocoa and chocolate; keep up patient's general health and nutrition by every means; a general prescription of sodium benzoate gr. x, tinct. digitalis m. x and an ounce of infusion of gentian t. i. d.; keep bowels acting with a bedtime pill of euonymus gr. i, ext. aloes gr. ii and ext. belladonna gr.  $\frac{1}{4}$ ; put patient to bed whenever serious symptoms appear; alkaline drinks—a quart of bitartrate of potassium imperial ( $\frac{1}{2}$  oz. to the pint of water) daily, or a bottle of Vichy water to reduce albumin; smart purge and hot air bath or pilocarpin ( $\frac{1}{12}$  gr. hypodermically) for minor uremic symptoms (sodium benzoate to ward off).—Saundby.

#### ACTIVE RENAL CONGESTION.

Small quantity of albumin; hyalin casts, blood cells and renal epithelia; urine increased at first, diminished later.

*Treatment:* Remove cause if possible; moderate heart's action if due to cardiac hypertrophy; no special indications in infectious diseases; in case of injury enforce absolute quiet and rest, with cold, cupping or leeches to back; allay pain, avoid stimulants and restrict to non-nitrogenous diet, especially thin rice gruel.—W. F. McNutt.

Sweet spirit of nitre.

Active saline cathartic for scarlatinal.—Osler.

Any juniper preparation; poultices made of digitalis leaves applied over loins as a sedative and diuretic.—Butler.

#### PASSIVE RENAL CONGESTION.

Usually a small amount of albumin; urine always diminished and darker than normal; a few small hyaline casts and scattering blood corpuscles; dropsy of lower limbs and other signs of circulatory obstruction.

*Treatment:* Cyanotic Induration: Potassium iodid, convallaria, caffein and digitalis as heart tonics and diuretics; amyl nitrite inhalations; opium with caution for dyspnea; inhalations of ether to render patient's last days more comfortable.—Robert T. Edes.

Feeble Heart: Rest in bed; strophanthus and digitalis; avoid cold, damp, changeable weather; woolen undergarments; generous, highly nutritious diet, avoiding alcohol and using proteids sparingly if much albumin.—N. S. Davis, Jr.

Cardiac Disease: Strychnin (with phosphoric acid to older patients, and iron to younger), 1/60 gr. increased to 1/25 gr. (substitute quinin if strychnin produces headache).—McNutt.

#### RENAL TUBERCULOSIS.

Albumin  $\frac{1}{4}$  of 1 per cent or more; turbid urine containing pus and tubercle bacilli; polyuria an early symptom; evening fever, night sweats, emaciation; usually secondary.

*Treatment:* General anti-tubercular treatment; early nephrotomy and drainage or antiseptic packing; nephrectomy after general destruction of organ or formation of perinephric abscess, unless other kidney and lower urinary organs similarly affected.—Roberts.

#### SIMPLE RENAL ATROPHY.

Urine dense, cloudy or milky, containing cylinders, fatty elements with tinted nuclei, mucus, uric acid, urates, pigment and often sugar.

#### SUPPURATIVE PYELONEPHRITIS.

Albumin in excess of pus and blood; scanty, pale, dirty urine of low specific gravity; much pus and many bacteria (may be bacterial casts); pronounced rigor, high fever and sweats.

*Treatment:* Remove disease of lower urinary tract and prevent putrefaction therein; vigorous stimulation and supporting constitutional measures; quinin and laxatives freely; local depletion in acute cases; lay open and wash out sac, free of foreign bodies if present, drain and suture to surface.—Roberts.

Infant Girls: Long-continued administration of potassium citrate, 24 to 48 grains daily, with as much fluid as possible.—Thompson.

Nutritious, easily digested food; promote action of skin by vapor or hot air baths; hot sand on loins or dry cupping if much lumbar pain; keep bowels active; quinin with small doses of opium or liquor morphinæ.—Taylor.

#### AMYLOID DEGENERATION.

Globulin sometimes exceeds albumin; amyloid casts; syphilis or chronic bone suppuration.

*Treatment:* Same as for late syphilis in syphilitic cases—also tonics, stimulants, carefully regulated diet and minute attention to general hygiene.—White and Martin.

Remove cause by surgical measures or otherwise; fresh air, generous, varied diet, including beef tea; potassium salts with iron and quinin; cod-liver oil; iodid of potassium and iron for syphilitic cases; diuretics with iron for edema.—Dickinson.

#### OTHER ORGANIC CHANGES.

*Malignant Growths:* Slight or moderate albuminuria with sudden, unprovoked, profuse hemorrhages.

*Treatment:* Relief of pain by opium and local applications, keeping up strength with nutritious, easily digested diet and

moderate use of wine or small quantities of brandy.

*Renal Cysts:* Albumin 5 to 30 per cent by volume; pus, blood and large granular casts; urine increased and of low specific gravity; renal sponge-like tumor (unilateral or bilateral).

*Treatment:* Acquired: Same as for chronic interstitial nephritis. Congenital: Frequent tapping; if this fails to cure, cut down and open cyst and attach its edges to those of parietal wound.—Am. Text-Book of Surgery.

*Hydatids:* Incision and suture of edges of cyst to parietal wound, and drainage; daily irrigations and dressings for a long time.—Am. Text-Book of Surgery.

*Renal Embolism:* Sudden and pronounced albuminuria with hematuria; acute endocarditis or atheromatous degeneration of valves; often sets up abscess.

*Thrombosis of Renal Veins:* Liable to occur from injury, compression of abdominal tumor or from inflammation extending from other organs; passive renal congestion.

*Movable or Floating Kidney:* Dragging sensations, painful crises (twisting of ureter) and dyspeptic symptoms; usually a little albumin; blood, pus and spindle-shaped epithelia; reniform tumor in abdomen slipping back into loin.

*Treatment:* Abstention from violent exercise; rest in recumbent posture; support kidney by spring truss with large pads pressing on front of affected loin, or by a broad bandage with large pad sewn into it and so arranged as to prevent vertical displacement, or by a tight-fitting elastic bandage extending from groin to sixth or seventh rib and covering an air pad; nephrorraphy in severe cases.—Taylor.

*Hydronephrosis:* Slight amount of albumin; a few pus and blood cells and pelvic epithelia; unilateral fluctuating

renal tumor suddenly collapsing with increased flow of urine; dyspeptic symptoms.

*Treatment:* Symptomatic in mild cases; properly directed and cautiously applied massage; puncture and aspiration, nephrotomy and drainage, nephrorraphy, nephrectomy or formation of renal fistula when successive reaccumulations of fluid occur.—Anders.

#### CONDITIONS OF THE URINE.

*Irritation of Urinary Sediment:* Uric acid or calcium oxalate crystals or excess of phosphates or urates.

*Treatment:* Urates: Citrate or acetate of potassium, 30 to 60 gr. well diluted with water, every three or four hours.—Roberts.

*Phosphates:* Meat diet; dilute nitromuriatic acid in doses of 5 to 10 m. to keep urine acid.—N. S. Davis, Jr.

*Calcium Oxalate:* Dilute nitrohydrochloric acid; exclude meat, wines and excess of vegetables from diet.—Taylor.

*Uric Acid:* R. Lithii benzoat. gr. v; tinct. belladonnæ m. ii; ext. tritici repentis fl. q. s.: Teaspoonful every two or three hours.—Shoemaker.

*Hyperacidity:* Readily remedied by milk and vegetable diet and use of alkalies.

*Trauma:* See under active congestion above.

*Nephropexy and Other Kidney Operations:* Frequently casts; but little albumin.

#### NERVOUS.

Albuminuria usually slight; nervous symptoms predominate.

*Causes:* Head injuries (concussion of brain), cerebral hemorrhage and other lesions of brain and spinal cord (particularly about medulla); surgical shock; cerebral tumors (may simulate interstitial nephritis); incarcerated hernia; acute intestinal obstruction; migraine, epilepsy (after attacks), apoplexy, paresis, mania, delirium tremens, tetanus;

neurasthenia; mental strain and worry; lead colic; myositis; pregnancy.

*Treatment:* Functional Nervous Disorders: Dilute nitromuriatic acid, 20 drops in a wineglassful of water before meals.—Landon Carter Gray.

*Neurasthenia:* General faradization and galvanization; persistent counter-irritation over kidneys; vegetable tonics.—Beard.

#### CIRCULATORY.

Little albumin as a rule; temporary or permanent; signs of general circulatory derangement.

*Causes:* Organic cardiac disease, particularly with failing compensation; passive congestion from great systemic weakness; compression of renal veins by tumor or pregnant uterus; emphysema, chronic bronchitis; hepatic cirrhosis; exophthalmic goiter; pleuritic effusions; senile insufficiency; renal ischemia from cholera or severe diarrheas and even simple enteritis; chronic tuberculosis; syphilitic hepatitis or splenitis. Hypostatic albuminuria (disappearing in erect posture) from pressure of enlarged spleen on left renal vein.

*Treatment:* See above under passive hyperemia.

*Senile Insufficiency:* Iodid or acetate of sodium, caffeine; dry friction of loins; trinitrin.—Grocodo.

*Pregnancy:* R. Pilocarpinae hydrochlor. gr. 1/12; potass. bicarb. gr. viiss.; acidi benzoici gr. iiiss.; tinct. cardamomi m. x; aquam q. s.: Teaspoonful in water every three hours.—E. L. B. Godfrey.

*Syphilitic Visceral Disease:* Mercury in early secondary period; for tertiary, use mercurial inunctions and large doses of potassium iodid (begin with 30 gr. a day and run dose up by 5 gr. a day till symptoms yield or iodism is produced.)—White and Martin.

#### OBSTRUCTIVE WITH DIMINUTION OF URINE.

*Impacted Calculus:* Aching pain in loin; crystals and concretions; bloody urine.

*Treatment:* Immediate nephrolithotomy: Very oblique lumbar incision, commencing an inch above and in front of anterior superior iliac spine and continuing outwards and backwards to outer edge of erector spinae muscle about a finger's breadth below last rib; free kidney of connections, draw out and incise convex border; remove calculi (through longitudinal incision if in ureter), closing inner wound with Lambert sutures—parietal with large Hagedorn curved needles; irrigate sacculated and suppurating kidney freely with hot antiseptic solutions; leave in drainage tube.—Henry Morris.

*Twist of Ureter by Displaced Kidney:* Dietl's crises—sudden, severe attacks of fever, vomiting, gastralgia, nephritis and collapse.

*Pressure on Ureter by Tumor or Pregnant Uterus.*

*Peritonitic Adhesions:* Periureteritis.

*Ureteral Tuberculosis:* Ureter greatly enlarged, thick, hard, very sensitive, more or less nodular, lumpy or uneven; tubercles or injection about vesical orifice.

*Treatment:* Nephroureterectomy.—Kelly.

*Stricture of Ureter:* Hydroureter from chronic ureteritis; passing ureteral catheter or sound through constriction, lets out considerable urine.

*Treatment:* Repeated successive passage of metal catheters, increasing in size from 2 to 5 mm. diameter, and washing out ureter and pelvis with saturated boric acid solution.—Kelly.

*Uric Acid Infarcts of Infants:* Highly acid condensed urine; painful micturition; sandy deposit on diapers.

*Treatment:* Abundance of drinking water containing a little sodium phos-

phate; colon injections of a gill or a pint of warm water.

#### HEMIC: WITH ABNORMAL BLOOD CHANGES.

*Causes:* All forms of gastrointestinal autointoxication (albumin disappears rapidly under internal antisepsis); scurvy, purpura, leukemia, pernicious anemia, cholemia (jaundice), and acute yellow atrophy; obesity; diabetes mellitus (albumin in one-third of all cases; from irritation of sugar); gout and syphilis; severe stomach disease (ulcer); nutrient enemata; pregnancy and puerperal septicemia; cachexias (syphilis, tuberculosis, malignant disease); hepatic insufficiency (hyalin and granular casts, glycosuria, indicanuria, urobilinuria, deficient urea); Kahler's disease (painful bone swellings, spontaneous fractures; marked, persistent albuminuria).

*Treatment:* Gout or rheumatism: Calomel, purgatives and salicylates cause rapid disappearance.—Weber.

Pregnancy: Caffein in 3-grain doses, or benzoic acid as a diuretic.—Norris.

Pregnancy: Milk diet; spartein sulphate 1/10 gr. four times a day; cream of tartar as needed to keep bowels open.

Pregnancy: Free laxatives; citrate or bitartrate of potassium as diuretics, daily warm baths followed by a good rubbing, flannel underclothing, daily outdoor exercise, and nearly exclusive milk diet; nitro-glycerin for high arterial tension; massage and bandaging or confinement to bed for edema.—Brodhead.

Renal Lesions of Pregnancy: Non-nitrogenous diet, chiefly milk; bread and potatoes in moderation; forbid meat and alcohol; iron peptonate in full doses; avoid taking cold by wearing flannel; abundance of water; frequent hot baths (hot pack if symptoms of impending uremia); empty uterus if symptoms become urgent.—Grandin and Jarman.

Puerperal Septicemia: Dry cups over

kidneys; dilute drinks freely; tincture of iron in 15 to 30-drop doses well diluted.

#### TOXIC.

Local irritant action on kidneys; often bloody or discolored urine.

*Causes:* Turpentine, cantharides, salt-petre, carbolic and salicylic acids, tar, creosote, iodin, alcohol, phosphorus, ether, chloroform, strychnin, ammonia, mineral acids, carbon monoxid (illuminating gas), arsenic, mercury, lead; transfusion of human or antitoxic sera or saline solutions.

*Treatment:* Hydrargyrium: Withdraw drug and inaugurate tonic and stimulant course of treatment; change of air and surroundings very serviceable when reinforced by scrupulous hygiene and carefully selected ferruginous tonic.—White and Martin.

#### FEBRILE.

Hemic, toxic, circulatory and renal forms combined; often cylindroids and hyalin or partly granular casts. Common in nearly all inflammations and acute infections, particularly scarlatina (post-febrile acute nephritis), diphtheria (nephritis during attack), follicular tonsillitis, rheumatism, colds, influenza, pneumonia, small-pox, typhoid and yellow fevers, tuberculosis, empyema and malaria.

*Treatment:* Scarlatinal Nephritis: Hot bath or pack twice a day, or if heart strong give pilocarpin hydrochlorate hypodermically two or three times a day with alcohol; sometimes gallic acid, gr. v-xv daily.—Jacobi.

#### FALSE, ACCIDENTAL OR ADVENTITIOUS.

Due to pus or blood from any part of urinary tract, or to semen or vaginal discharges.

*Causes:* Cystitis (vesical tenesmus, pain and tenderness; very little albumin except in chronic); pyelitis (more albumin than in cystitis; aching lumbar pain; frequent but painless micturition); pyonephrosis (chills and fever; marked

lumbar pain; sudden blocking of ureter at times); pyelonephritis (pus casts); renal or vesical calculus, tuberculosis or neoplasms; movable or floating kidney; renal embolism; renal cysts; prostatitis (prostate hot, tender and swollen); urethritis (pus can be milked out); leucorrhea (catheterization excludes).

In hematuric albuminuria globulin often increased to equal or exceed serum albumin; number of red blood cells per cu. mm. divided into percentage of albumin by Esbach's method less than 1/30000 if albumin due solely to blood—more than 1/30000 if albumin in excess of blood contents. If ratio of albumin to hemoglobin is above the proportion of 1 to 16, true albuminuria is also present and the hemorrhage is probably of renal origin (blood casts).

In pyuria 100,000 pus cells (well mixed daily urine with same volume of staining fluid) equals 1 per cent by volume (Esbach's albuminometer) of albumin.

### *CRIMINAL ABORTION*

MINNIE C. T. LOVE, M. D., DENVER

Happily, the time has long past when there was any question among civilized peoples as to the moral and economic attitude to be assumed toward unjustifiable abortion. It long since became a crime in the eyes of the world, and in the law.

The evolution of respect for human life and rights has been slow; if this is true of living men and women, is it surprising that the rights of unborn children were not recognized until science demonstrated, social economics demanded, and religion exhorted?

I am led to believe that the term criminal abortion is a comparatively modern one, for even as late as 1868 I find in Dr. Storer's work on the subject a chapter entitled "Is Abortion Ever a Crime?" This would indicate that there was somewhere still a doubt as to its criminality if

unattended by the death of the mother.

Thirty-five years ago, as you all doubtless know, the American Medical Assoc. offered a prize for the best essay on criminal abortion, for the use of the laity. The prize was awarded to Professor H. R. Storer for his essay entitled "Why Not?" This was largely circulated, and undoubtedly aroused much discussion and thought. The work above referred to, "Criminal Abortion," published in 1868, is not only a legal document of no mean value, but an inspiring and convincing one to the medical profession. Dr. Storer's researches demonstrated that, even in his day, the crime was increasing rapidly, and this opinion was sustained, both in debate and published works by many well-known members of our profession. The only reliable means of judging as to the increase or decrease, was then, as now, through vital statistics, which gave the reported cases of still-born and maternal deaths resulting from abortion. While this is extremely inadequate, it is still a starting point in the inquiry.

I do not, either now, or in the future, in the least presume to do for the early twentieth century what Dr. Storer did for the nineteenth, but it has occurred to me, that after the lapse of so many years, there must be much valuable data which could be collected, and if this society were to offer an adequate prize for a paper which should give us that data, it would surely stimulate the profession to be more aggressive, and to try more than ever to educate the laity as to their right attitude towards this truly degrading and disgusting crime.

There have been in all ages the few who recognized the necessity of preserving the fruits of conception. Among savage and semi-civilized nations, however, abortion was common, and even the civilization of ancient Greece was not a civilization in this particular. The Stoics even taught that the soul was not united to the body

until the act of respiration, and it was not, therefore, criminal to destroy the child "en ventre de sa mère." (Ref. Hand. Med. Sc., 1885.)

For a great many centuries the extent of criminality depended on the length of time to which gestation had progressed. Hippocrates said that the thirty-second day of gestation for males, and forty-second day for females was when life began in the foetus; and Galen put it at the fortieth day. It was held, too, that the mother had the same right to destroy her child before birth as to remove a tumor. The Justinian Code even fixed animation at forty days after conception. (Cameron Med. Juris.) In England the old common law considered life not to commence before the infant stirred in the womb. The punishment before quickening was only for a felony, but after this event death. There was, so late as the last century, confusion as to the term "new-born." In 1824 Werner defined it as "neither fed nor clad, and while no one but father and mother knew of birth." The Oldenburgh statute book defines new-born as "not yet three days old," while the German and Austrian statutes define it "in or immediately after birth;" the Italian code, "of recent birth," and Francis Olliver, "up to the fall of the cord, five or six days." (*Ibid.*) The Austrian statute also distinguished between legitimacy and illegitimacy; if the former, the mother is held more guilty. (*Ibid.*)

I think that we will find that it is only in the latter half of the nineteenth century that there was enough growth of public opinion to have embodied in the statutes of our own country the result of the teachings of the medical profession: that life begins with conception, and neither quickening nor birth alter the criminal aspect of abortion. But there is still a marked distinction in the law, between the death of the mother and that of the unborn child.

The law of Pennsylvania, which the *Journal of Medical Science* says is a fair sample of the good laws in the United States, preserves the term "quick," though not limited in its application to that idea. If the mother lives, the penalty is a fine not exceeding \$500 and imprisonment not to exceed three years, but if the mother dies, the term is seven years, with fine; but irrespective of the above statutes, both in England and America, if the woman dies the perpetrator may be indicted for murder or manslaughter; if no intent is shown, it is manslaughter.

All European nations except England, and some of the United States, have the same legislation, the modern tendency being to do away with any distinction in the matter of the period of gestation, and it is held that the viability of the child is not essential to the criminality of the offense.

In New York, up to 1885, the old common law distinction relative to quickening was retained, but the courts could not agree as to the stage of gestation—exactly when this occurred. Wharton says: "Quickening is a mere circumstance in the physiological history of the foetus," which is in perfect accord with our attitude on the subject. (Ref. Hand. Med. Sc., 1885.)

The International Encyclopedia, 1892, states that "the courts in this country are not agreed as to the nature of the crime at common law. In a number of states there are decisions or dicta, to the effect that 'to produce an abortion on a woman before she is quick with child, and with her consent,' is not to commit the common law crime of abortion."

As it has taken many centuries for the courts and society to reach their present opinions in regard to individual rights and obligations, so it will undoubtedly require many more to reach an ideal state wherein, at least, courts are not needed. As a matter of fact, human nature is still very human, and we are not so far, in all

respects, from the barbarism of the dark ages as many would have us think.

Perhaps, among the several causes which operate to perpetuate unjustifiable abortion among civilized nations, is the frequency with which it occurs from unavoidable causes. In the vegetable world, as well as in the animal, nature is so prolific and seemingly so prodigal, that thousands of seed are produced and lost for every one impregnated; and furthermore, of those impregnated probably not more than one-half or two-thirds reach maturity. Whitehead estimates that at least 90 per cent of married women who have come to the menopause have been the subjects of abortion. Hegar considers that there is one abortion for every eight or ten normal deliveries, or rather, deliveries at term. Devilliers puts the ratio 1 in 3 to 4. (Intern. Ency., 1902.) Priestly found that 400 women, among whom there had been 2,325 pregnancies, gave a return of 542 abortions, about 1 in 4. To be sure, these estimates do not separate criminal from unavoidable abortion, but we must all admit the unfortunate frequency of the latter accident. A significant fact which I have noticed is that the vast majority of parents consider this a fortunate accident, with no thought of the wasted life of the child, but only of the possible danger of the mother. May not this familiarity account in some measure for the failure on the part of the laity to appreciate the seriousness of such an accident? To some minds it is but a step from the unaccountably interrupted pregnancy to the one purposely terminated. Modern medical and surgical skill will undoubtedly change the ratio of loss very materially, but so far it has not yet impressed the public mind.

These two causes, ignorance and familiarity, are not enough; we must look into the social condition of those who seek abortion to evade motherhood. A common fallacy exists among the laity, to

the effect that only unfortunate girls and degraded women commit this crime. We know that the women of the street only exceptionally need to resort to abortion. While they yet belong to a certain class, not absolutely common, their resort to it is probably frequent. As for the unfortunates, Storer points out the reason why they do not more often free themselves of the evidence of their shame; they are prone to conceal their condition until life is felt, and concealment is no longer possible, but they shrink from killing a living child; and so, all over this country and throughout the old world, there are rescue homes and lying-in hospitals for the mothers of illegitimate children. Fearing that my limited personal experience might have led me to false conclusions on some points, I wished the opinion of some of my confreres on this and two or three other questions pertaining to the subject, so I sent twenty-five circulars to as many physicians, nearly all of whom live in Denver. Sixteen responded to my request. The first question: Which of the following classes of women do you think furnish the greatest number of criminal abortions? (a) married, rich, middle, or poor; or (b) unmarried, prostitutes or unfortunates.

Of the sixteen answers, twelve placed the greatest number among the middle class of married women; one was of the opinion that the three classes of married women in proportion to their numbers were equally guilty; one that unfortunates are most often guilty; one the rich married, and one did not venture an opinion. Married rich women seemed to occupy the second place in point of frequency, and unfortunates the third. Poor women, while not guiltless, for many reasons are not the most guilty. These answers coincide very nearly with my own views and experiences on the subject, and I presume are pretty nearly the opinions of the majority of the profession.

Question No. 2. Has there, in your opinion, been a relative increase or decrease of this crime during the past fifty years? Fourteen answered "Increase;" two were in doubt. From these answers, and other signs of the times, we may safely conclude that efforts in this direction have not been crowned with quite gratifying success.

Of those who perpetrate the crime, I am unable to form a very correct opinion. A writer in Med. Sc. for 1900 says that "the practice in prohibited cases is confined to medical men of low professional standing, midwives and other unskillful persons." He may mean to include in this last category the mothers themselves. I believe he should, as the worst cases I ever had were women who admitted that they had used means themselves to abort. As for those who commit abortion, professional abortionists, there is nothing to say; language cannot do justice to their criminality, about which there is no dispute in our profession. True, there are many cases, unfortunately, where mercy might find extenuating circumstances on the part of the mother who seeks relief. We all know these cases, and they have our sympathy, but not our help.

It may not be amiss just here to speak of methods. And are we not frequently reminded of the proverb, "Fools rush in where angels fear to tread." Cameron, in his Med. Juris., says: "Rude measures, drugs and decoctions, and many of the manipulations and operations, were in use since ancient times, and the lower classes are usually familiar with drugs which have old-time reputation for producing abortion." One physician to whom I sent a circular, called attention to the fact that "at no time in the history of medicine, have the means for producing abortions been so safe, so accessible, so widely known and easily applicable as at present."

The third question was: What percentage of women suffering from diseases peculiar to their sex may, approximately, be attributed to criminal abortion? They were answered as follows: Two gave no estimate; one, not more than from normal labors; three, small; two, 5 per cent; two, 25 per cent; one, majority; one, large per cent; and one each 30, 40, 50 and 60 per cent. Thus, eight place the per cent as high as 25 and over. This estimate more nearly agrees with authors I have consulted. Playfair, for instance, says that "abortion is one of the most prolific causes of uterine disease." Garrigues: "Of conditions calling for gynaecological interference, by far greater importance is criminal abortion, so frequently resorted to by all classes of society, in the country as well as in cities." Hart and Barber give it as "prolific cause of endometritis." Dr. Ludlam says that thousands of women suffer the remote consequences. Thomas: "Criminal practice constitutes a prolific source of uterine disease." Time forbids further references, but all place the percentage of resulting pelvic inflammations as very high. Should not this knowledge, if freely known among women, act as a deterrent?

The last question: Do you think the instigator of the crime, either man or woman, should be punished as an accessory, as well as the perpetrator, was answered by a unanimous yes. One says that he does not think the present laws tend to decrease the crime, because they do not make any difference between men and women implicated. Further, laws made to apply to men are improper to apply to women, as the motive is different, hence should be handled differently, even though the crime be the same.

Although quite limited in extent, the results of my inquiries, made not alone by personal appeal, justify, I believe, con-

clusions which I present to you, knowing that they are crude and unelaborated, serving only as suggestions.

The causes which result in criminal abortion, and which have been in operation since the history of man began, are to a certain extent still in existence, and they are:

1. Want of respect for human life.
2. Ignorance of the true biological facts as to when life begins in the foetus.
3. True degeneracy and criminality.
4. Industrial conditions rendering the possession of large families a greater hardship during this unavoidable period of our social evolution.

5. An increasing tendency on the part of married people in large cities to live in a desultory, haphazard way, in boarding houses and tenements where incumbrances like children and dogs are not allowed.

6. Materialism and its too frequent association with indifference and irreligion.

These causes being still with us, we find:

That criminal abortion is at least not decreasing as it should in this age of apparently marvelous development.

That it is most prevalent in the social ranks where it can least afford to exist; namely, in the middle and upper classes.

That the law has not been able so far to control or even decrease this crime.

That the physical effects upon the mother are enormously prejudicial to health.

That it is morally degrading to all parties concerned.

That, from the standpoint of social economics, it is suicidal.

That from a legal standpoint it ignores the rights of the unborn.

Now, what can we do about it? Nothing new or startling, I imagine, yet certain facts present themselves to us, facts gained largely from the modern study of criminology, which ought not to be ig-

nored, and which lead to the following generalizations:

First—Limit the production of moral degenerates.

a. By separating or sterilizing the feeble-minded and idiots, and those hopelessly insane or epileptic.

b. Incarceration for life of male and female confirmed criminals.

Second—Disseminate positive knowledge on the following subjects relating to criminal abortion:

- a. Its effects on society.
- b. Its effects on the moral life of the parents.

c. On the physical life of the mother.

d. That individual life begins with conception.

e. The right of every unborn child to life.

f. The penalties prescribed by law.

Third—By encouraging greater love of home and family ties, through religious and ethical teachings.

Fourth—The elimination from the text of the law of the term "quick," which in its present sense is misleading; and finally, the framing of laws which will make convictions possible and thereby be not only punitive but deterrent.

Two conclusions seem inevitable to me: That only as society grows in knowledge of biological truths and respect for human life and the rights of individuals, will criminal abortion decrease, and to a certain extent disappear, and that so long as we shall have degenerates and criminals, both male and female, this crime will stain the annals of civilization.

Time forbids my dwelling upon what the medical profession has already done towards stamping out this evil; also the efforts of the Christian religion. These two professions have been active and aggressive in trying to eradicate this crime, at once unnatural and unholy, and we must admit that this much has been gained over the past: It is now considered

a crime and punished under the law; it is not talked over and bragged about; it is seeking cover. In this, it is as with murder, arson and other crimes.

While we must believe in the ultimate uplifting of the human race, let us not forget that effort is necessary, for without it we may fall into a condition of dry rot.

#### Discussion.

**Dr. Stuver:** I find that one great reason that there is so much criminal abortion is, that there appears to be an inclination, even in the medical profession, to consider the subject as somebody else's business. There is an inclination, I believe, on the part of very many physicians to consider that it is a matter that don't really concern them; that it is a delicate subject, and that it is one they don't care to talk about any more than they can help. Well, now, if it is necessary for the president of the United States to discuss race suicide and stir up this question, I believe it is the duty of the practicing physician to consider the life of unborn children of some interest to himself. If all persons who come to a physician for that sort of service had it thoroughly impressed upon their minds that it was a crime of the deepest dye, it would make some impression upon them. Of course there are some people that don't pay any attention to that sort of advice, who will laugh at the doctor for telling them that it is murder to kill an unborn infant; and they will go off to some other doctor with a more elastic conscience and probably accomplish their object. I believe that the great starting point is for every physician to try to educate the people up to a higher standard. Then we can get the ministers, teachers and other people who have an influence in moulding and controlling public opinion to take an active part with us in correcting the evil of criminal abortion.

**Dr. Wiest:** I would like to see the Colorado State Medical Society take some very active steps toward the abatement of criminal abortion. I would like to see it take active steps toward shutting out every man from the medical profession who produces criminal abortions in the state of Colorado, and there are a good many of them. There are a good many of them who are licensed by the State Board of Medical Examiners. There are a good many who, I was going to say, are members of the

Medical Societies. I am afraid there are. And I would like to see this Society take active steps toward throwing them out of the practice of medicine in the state of Colorado. In twelve years' practice in a country town, I have found that the vast majority guilty of criminal abortion are among the married women of the middle or even the better class of people. Of course that would be different in a small town from what it would be in the city.

**Dr Love:** I am glad my paper is well received, and I hope the subject will receive more attention from our society in the future than it has in the past, because I believe it is a very live subject in our profession.

#### STATE MEDICAL SOCIETY COMMITTEES.

The following Standing Committees for the year 1903-4 have been appointed by the President, Dr. T. H. Hawkins:

**Scientific Work**—J. M. Blaine, ex-Officio Secretary and Chairman, Edward Jackson and S. G. Bonney, all of Denver.

**Public Policy and Legislation**—S. D. Van Meter, Chairman, J. M. Blaine, C. K. Fleming, W. W. Grant and J. N. Hall, of Denver, and W. W. Reed, of Boulder.

**Necrology**—C. D. Spivak, Chairman, Denver; G. Law, Greeley, E. M. Marbourg, Pueblo, and M. Kahn, of Denver.

#### COUNTY MEDICAL SOCIETIES.

**Denver County Society.**—At the meeting of November 3, J. N. Hall, under the title "*An Unusual Form of Tuberculosis Disease of the Chest*," reported a series of cases characterized by presence of the symptoms, but absence of the physical signs of pulmonary tuberculosis. The typical cases have many hemorrhages, the sputa contain bacilli. They run a course of many years' duration, with periods of apparent health; and yet the chest appears normal upon examination. He believed the disease to be in the bronchial glands, the lungs proper not being involved. Two of his cases had done better at sea-level than in Colorado. One case lasted twenty-three years and was still in fair condition. No anatomical evidence could be brought forward since all of his patients were still living.

Robert Levy reported a case of **Dangerous Hemorrhage, Complicating Quinsy**. Deep scarification had been practiced, but the hemorrhage did not occur until four days later, when the scarifications had practically healed.

The hemorrhage was accompanied by dark purple swelling of the parts showing effusion of blood into the tissues. The patient recovered without ligation of any vessel. Dr. Hall reported a case in which hemorrhage came on several days after the spontaneous opening of the tonsil, and was so severe as to cause death in one or two minutes.

W. E. Shotwell reported a case of **Twin Pregnancy Terminating in Abortion**, in which each foetus had a separate sac and placenta.

C. D. Spivak referred, humorously, to the former difficulty in getting the patient to swallow the stomach tube for the purpose of obtaining a portion of the stomach's contents or washing out that organ. In contrast to this, he called attention to the present tendency to **Excessive Use of the Stomach-Tube**. Some patients use it without the advice of a physician, others continue its use when it is no longer indicated, having contracted a sort of "stomach-tube habit." In his experience not over 20 per cent of cases of disease of the stomach required lavage, and most of these need it only a few times.

November 17. E. P. Hershey brought forward **A Treatment for Diabetes Mellitus**, and reported the results obtained by it in six cases. In all of these cases its effect was distinctively favorable; some appeared to be permanently cured, one patient having remained well for a year and a half. In another case, in which sugar continued to be found in the urine, the patient was relieved of all distressing symptoms and gained rapidly in weight. In one case there was great improvement each time the drug was taken; and relapse when it was discontinued. The treatment consisted in the administration of fluid extract of anhalonium (mescal button), five minims four times a day. He compared the physiologic actions of this drug with those of opium and ergot. He believed that under its administration the patient could indulge with impunity in a comparatively liberal diet.

J. R. Arneill read a paper upon **Cancer of the Stomach**; giving a resume of cases from the standpoint of diagnosis and medical and surgical treatment. Medical treatment could only be palliative; and unfortunately, in most cases, when they came to resort to it, surgical treatment was merely palliative also. Upon early diagnosis rested the only possible chance for radical cure. Unfortunately, examination of the stomach contents gave no certain evidence of cancer. Usually there was deficiency of hydrochloric acid, but in series

of cases, two showed hyperacidity. On the other hand, nine cases of pernicious anaemia showed absence of hydrochloric acid. However, the cases of pernicious anaemia showed good motor action on the part of the stomach while those of cancer all gave good evidence of stagnation and fermentation of the stomach contents. A careful blood examination, also, would discriminate between the cases of pernicious anaemia and cancer. Taken in connection with other symptoms laboratory examinations were of great importance. The above papers was discussed by Drs. Powers, Hall and Rogers.

**El Paso.**—The meeting of November 18, held at the Antlers Hotel, Colorado Springs, was well attended and much interest shown. It was devoted chiefly to the consideration of "Professional Ethics," the discussion being opened under the following topical heads.

Opened by W. H. Swan: "What should be the attitude of a consultant with regard to a case seen in consultation, after patient has dismissed his regular attendant: (1) If attendant asks him to take charge of the case; (2) If the family has asked him in consultation; (3) If attendant had asked for him in consultation.

II. "Conduct of family physician toward consultant at and after consultation, opened by Dr. S. E. Solly.

III. Opened by Dr. W. A. Campbell: "What should be the conduct of a physician put in charge of a patient by a colleague during latter's absence or illness as to retaining case:" (1) During continuance of illness of patient; (2) If requested in future to take charge of other illnesses of patient or of patient's family.

IV. Opened by Dr. P. F. Gildea: "Ethical relation of specialist to general practitioner.

V. Opened by Dr. W. H. Hoagland: "Physician's attitude toward mention of his name in newspapers.

VI. Opened by Dr. J. A. Hart: "Should a regular physician consult with a homeopath or other irregular.

The by-laws were amended by the adoption of the following: "No rejected applicant may re-apply for membership within a period of less than six months from the date of his rejection."

**Las Animas County.** The annual banquet of the Society will be held at Trinidad, Thursday, December 17. A number of members of the profession from outside the county are expected to attend it.

**Fremont County Medical Society** holds its meetings every second month upon the first Monday evening of the month, alternating at Canon City and Florence. The November meeting was devoted to the discussion of a Fee Bill.

#### OTHER MEDICAL SOCIETIES.

**Denver Clinical and Pathological Society.**—The annual meeting was held October 16. The following officers were elected: President, S. G. Bonney; First Vice President, C. E. Hill; Second Vice President, C. E. Edson; Secretary, F. W. Kenney; Treasurer, C. B. Van Zant.

Dr. Hill exhibited a specimen of lining of the bladder, showing fatty epithelium, also a photograph of prostatic pus casts.

Dr. Freeman exhibited a specimen of the stomach of a patient, on whom gastroenterostomy had been done for relief from gastric ulcer. Death was due to the patient's exsanguinated condition, previous to operation, there being no evidence of an inflammatory condition, while the shrunken condition of the stomach demonstrated the beneficent effects of drainage.

Dr. Black reported a case of metastatic choroiditis, following pneumonia.

Dr. Lyman reported a case of separation of the sacroiliac synchondrosis, due to traumatism. Recovery. Dr. Hall reported four cases of pernicious anaemia; the first three having greatly enlarged livers apparently recovered on large doses of Fowler's solution. The fourth, with a small liver, was not able to take the solution and remained in *statu quo*. Dr. Hershey recommended "cacodylate of soda;" and Dr. Blaine recommended "Asiatic pill," as methods of administering arsenic.

Dr. Wetherill discussed the prevalence of albuminuria in pregnancy; in many cases there being no headache or convulsions; and reported three cases relieved by accouche-ment force.

Dr. Stover reported a case of girl thirteen years cured of tuberculosis of the tibia, by eleven exposures to the X-ray.

Dr. Pershing reported the case of a man forty-four years, with aphasia, resulting from a vascular lesion; there being no paralysis.

Dr. Nesmith reported the later results of treatment in fifteen cases of pernicious anaemia, with one recovery, and the rest unimproved or dead. The treatment used included fresh beef juice.

Dr. Taussig reported a case of Corrigan's pulse and evidences of aortic insufficiency in a case of typhoid.

Dr. Grant reported a case of old empyema following pneumonia in a boy of nine years; also a case of tubercular glands of the neck, not operated, the patient dying later with tubercular meningitis.

Dr. Waxham reported a case of deformity of nose, corrected by a plastic operation, in a boy of fifteen years. Also a series of three cases in one family, of oedema of glottis. Tracheotomy was done in the first case, no membrane being noticed. The second had tonsilitis. A bacteriological examination was made in the last case, the result proving the presence of Klebs-Loeffler bacillus. Antitoxin was administered in all the cases.

Dr. Jackson reported cases of eye strain and headache relieved by proper glasses.

Dr. Bonney reported a case of accidental poisoning with 15 4-10 grains of corrosive sublimate. Also a case of empyema with fever persisting some months after operation; the treatment consisting of irrigation with salt solution, and dressing with iodoform; the temperature being reduced when the iodoform was used.

At the meeting of November 13, cases were exhibited as follows: By Dr. Grant, one of Restoration of the Lips by plastic operation after closure by typhoid fever. By Dr. Powers: A Man on Whom Suprapubic Cystotomy had been done eight years ago, for bladder tuberculosis. Dr. Powers also exhibited a device for draining the bladder after cystotomy by automatic intermittent syphoning. Dr. Hilkowitz exhibited a kidney showing extension of the cortex into the papillary layer. Dr. Freeman exhibited an instrument he had devised in 1899 for the segregation of the urine in the bladder; and called attention to its very close resemblance to the instrument recently invented by Luys, of Paris. He also exhibited a clamp for united fractures.

Dr. Hall reported a case of embolism of the pons due to endocarditis. Dr. Waxham reported a case of intubation to facilitate the removal of a goiter, so large as to flatten the trachea by pressure. Dr. Van Zant reported a case of recurring appendicitis, each attack being followed by rheumatic iritis. Dr. Levy reported a case of goiter with paralysis of the left vocal band, relieved by the use of thyroid extract. Dr. Taussig discussed the use of sodium chlorid in dropsy; and reported a case of addiction to the use of large quantities of raw starch. Dr. Hill exhibited photographs of different forms of crystalline urates. Dr. Wetherill reported a case of essential irregular contraction and enormous thickening

of the peritoneum; causing stricture of the rectum and finally complete obstruction of the bowels. Drs. Rogers and Perkins reported cases of rudimentary uterus or complete absence of that organ. Dr. Bonney reported a case of tape-worm, in which pelleteerin failed to remove the worm, but was followed by hyaline and granular casts in the urine without albumin. He also reported a case of tuberculosis of the testicle.

F. W. KENNEY, Secretary.

The Colorado Ophthalmological Society met October 17, at the office of Dr. Walter Hilliard. The following cases were presented: By Dr. W. C. Bane: Injury of the Macula, from a Blow of a Baseball, the Condition Resembling the So-Called "Holes at the Macula," of British Authors. By Dr. M. Black: Atrophy of Choroid in the Region of the Macula with Central Scotoma; also one of Glaucoma with Keratitis and Vitreous Opacities. By Dr. E. Jackson: A Case of Traumatic Dislocation of the Lacrimal Gland; and Embedding of Pieces of Wood in the Orbit. Under reports of Cases: Dr. G. F. Libby gave one of a splinter of steel deeply embedded in the orbit, causing at first emphysema of the lids, but ultimately remaining in the orbit without causing symptoms. By Dr. E. R. Neeper, of a bit of broom-straw, with both ends embedded for eight weeks in the lower cul-de-sac, which caused polypoid growths at the points of penetration, and where it rubbed against the globe. By Dr. E. W. Stevens, one of dendritic ulcer, resisting all usual methods of treatment, and repeatedly relapsing. By Dr. D. H. Coover, a case of papilloma of the cornea involving almost the whole limbus and a large part of the cornea; removed by operation without return. This report was illustrated by photographs and microscopic slides. Dr. Neeper presented a new instrument for measuring the prominence of the eye-ball, and Dr. Jackson exhibited the Zeiss instrument for measuring the distance between the centers of the pupils.

November 27.

The meeting was held at the office of Dr. Stevens, in Denver. Cases were presented by Dr. Black, of glaucoma; amblyopia with pale optic discs; amblyopia of one eye without evident cause; interstitial keratitis and staphyloma; and injury in which it was impossible to localize a foreign body that was probably present.

By Dr. Bane, showing the ultimate results of operation for symblepharon; adherent leu-

coma; streptococcus keratitis; and rupture or cut of cornea. Dr. Coover reported a case of recurring hernia of the vitreous; and one of foreign body in the eye. Dr. Hilliard had seen a case of dacryocystitis apparently cured by an attack of erysipelas. Dr. Black had seen two similar cases, and believed the explanation to be a spontaneous obliteration of the lacrimal sac.

In the discussion on *Therapeutics of External Diseases of the Eye and its Appendages*, Dr. Hillard called attention to the value of argyrol, and Dr. Libby to that of protargol, in dacryocystitis. Dr. Black, to the influence of iodine vasogen, 10 per cent, in sluggish inflammatory conditions; and the clearing of pannus under ichthargan. Dr. Jackson spoke of argyrosis of the conjunctiva, caused by the new silver salts; and the value of nitric acid in superficial and creeping ulcers of the cornea. Dr. Patterson spoke of the use of argyrol in sinus disease; and the value of copper citrate for trachoma.

#### COMING MEETINGS.

The Western Surgical and Gynecological Association will hold its thirteenth annual meeting in Denver, December 28-29, 1903. The official program is not yet published, but among the papers that have been sent in are: "Reports of Pancreatic Cyst," and "Primary Carcinoma of the Lung," by W. W. Grant; "Simple Surgical Methods," by H. G. Wetherill, of Denver; and "Gastro-Enterostomy for Acute Hematemesis," by F. Gregory Connell, of Leadville, Colo. There will be a symposium on "Prostatic Hypertrophy," by G. F. Goodfellow, San Francisco, J. E. Moore, Minneapolis, Minn., and J. B. Murphy, Chicago. There will also be papers on "Cholecystitis," by T. E. Potter, St. Joseph, Mo.; "Rectal Cancer," by A. F. Jonas, Omaha, Neb.; "Abortion in Relation to Peritonitis," A. E. Hertzler, Kansas City, Mo.; "Surgery of Hydrocephalus," illustrated with 100 stereopticon slides," B. Merrill Ricketts, Cincinnati, O.; "Ectopic Gestation," Wm. E. Ground, Superior, Wis.; "Accidental Perforations of the Uterus," D. S. Fairchilds, Des Moines, Iowa; The Treatment of Gastric Ulcer," H. D. Niles, Salt Lake City, Utah; "Meningocele," A. E. Benjamin, Minneapolis, Minn.; "Ulcer of the Duodenum," J. W. Andrews, Minneapolis, Minn.; "The Imperfect and Abnormal Descent of the Testis," D. N. Esindrath, Chicago, Ill.; "Complications in Ovariectomy," Lewis Schoeler, Des Moines, Ia.; "Retrodisplacements of

the Uterus," C. W. Oviatt, Oshkosh, Wis.; "Intracapsular Fractures of the Femoral Neck," C. E. Ruth, Keokuk, Ia.; "Multible Loose Bodies in the Knee-Joint," J. P. Lord, Omaha, Neb.; "Surgical Treatment of Pulmonary Abscess," Van Buren Knott, Sioux City, Ia.; "Use of Silver Foil to Prevent Adhesions in Brain Surgery," M. L. Harris, Chicago, Ill.; "Criminality in Using Chloroform Unless Ether is Positively Contradicted," W. O. Henry, Omaha, Neb.; "The Surgery of the Arteries," O. B. Campbell, St. Joseph, Mo.; "Surgical Treatment of Goiter," C. H. Mayo, Rochester, Minn.; "The Differential Diagnosis Between Appendicitis and Ovaritis," R. H. Reed, Rock Springs, Wyo.; "Portal Obstruction with Gastro-Intestinal Hemorrhage following Operations," Donald Macrea, Jr., Council Bluffs, Ia.; "Perforations of the Duodenum," J. E. Summers, Omaha, Neb.; "The Surgical Treatment of Retroversion of the Uterus," F. H. Martin, Chicago, Ill.

The meeting will be held in the ordinary of the Brown Palace hotel; and on the evening of the 28th the banquet will occur at the same place. The medical profession of Denver and of Colorado will have the opportunity to attend these very interesting and instructive sessions; and, also, to aid the Committee on Arrangements, consisting of Dr. Leonard Freeman, chairman, and Drs. Wetherill and Grant, in entertaining the distinguished visitors.

**The Mississippi Valley Medical Association** will hold its next meeting at Cincinnati, O., October 11, 12 and 13, 1904. This is the decision of the special committee appointed at the late meeting at Memphis to consider the question. Dr. Merrill Ricketts, of Cincinnati, is chairman of the committee on arrangements.

#### BOOKS.

**Transactions of the Medical Association of the State of Alabama, 1903**—This volume of 553 pages includes the proceedings of the annual meeting; reports made to it and "medical and sanitary dissertations" read before it; with rolls of members and members of county societies. The Society appears to not employ a stenographer, but to depend upon those discussing the papers read, to furnish their remarks for publication. The consequence is that the published discussions generally read like this: "Dr. Wyman's paper was also discussed by Drs. Wilder, of Birmingham; Duggar, of Prairieville; Wood, of Selma; and Jones and Riggs, of Birmingham, but these gentlemen failed to furnish any transcript of their remarks."

The volume is carefully edited, and makes an excellent appearance; but at the present day any book that is worth publishing is worthy of a carefully prepared alphabetical index; which, in this case, is conspicuously absent.

**Squint, Its Causes, Pathology and Treatment**, by Claud Worth, F. R. C. S., London; P. Blakiston's Son & Company, Philadelphia. This book of 240 pages marks an epoch in the literature of its subject. For twenty years the disorders of the ocular movements have been the subject of especial study on the part of ophthalmic surgeons. Worth seems to have devoted a large part of his time to it for the last ten years; and bases his book on 2,237 cases of squint and heterophoria, of which 1,729 were convergent squints. His cases have not merely been seen, they have been studied as few cases of strabismus have been studied heretofore. The work contains very little that is merely theoretical or historical. It is made up of practical discussion, methods of treatment and illustrative cases. To be well informed upon the subject of squint one must be familiar with the contents of this book.

#### DEATHS.

**Lewis Alva Pons**, a graduate of the Denver and Gross College of Medicine of the class of 1903, and interne at St. Joseph's Hospital, Denver, died at that institution, November 14, 1903, of pneumonia. He was 29 years of age, a native of Utah, and lived at Ogden, in that state, prior to entering upon the study of medicine.

#### NEWS ITEMS.

**Dr. Richard A. Pearse**, a graduate of Gross Medical College, of the class of 1900, was married November 14 to Miss Venna Nichols, of North Ogden. He is practicing his profession at Brigham City, Utah.

**Dr. A. A. Clough**, Health Commissioner of Denver, has invented a street sweeper to prevent the dust which usually arises from the operation of such machines, and to do away with the costly, unpleasant and dangerous sprinkling of paved streets.

**The Hospital Saturday and Sunday Association of Denver**, inaugurated its work by an active campaign on November 28 and 29. It will probably become a permanent institution, furnishing an occasion for special effort to arouse the community to the importance of sustaining the work of hospitals.

**Dr. Maurice Kahn**, formerly of Leadville, has removed to Denver.